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ABSTRACT

One of a series of pamphlets providing practical and useful sources of classroom techniques for social studies teachers, the concern of this issue is the use of simulations, specifically focused conversations, role-playing, sociodrama, and gaming. A review of the concept of simulation is followed by a discussion of the circumstances which maximize interaction in classrooms. Teacher role, student participation, and small group dynamics are summarized into seven steps for maximum classroom interaction. Applications for both elementary and high school grades are discussed. Simulations appropriate for the needs of elementary education are observed to be those with activities emphasizing free communication, social responsibility and democratic decision-making. In the high school, it is thought that the focused conversation technique creates student interest and develops self-confidence and leadership abilities. Several examples of games used successfully in high school situations are described and the role and nature of evaluation in simulation use are reviewed. References are followed by a general bibliography and a list of publishers of games. A related document is ED 083 057. (KSM)

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How To Do It Series

No. 26

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How To Use Simulations

Focused Conversations, Role Playing, Sociodrama, Gaming*

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Simulations As Models of Realities

For years football coaches have used the concept of simulation. It has been standard procedure for teams to practice the action expected in the next real game; the second team may even simulate the probable plays of the coming opposition. The new formations are played, analyzed, corrected and replayed to improve performance and increase the chances for success in the future.

Similarly, students of the social game may create models of the real thing in which they may practice social realities. This is a simulated activity. Let us start with an example of a simulation. Inbar (1) was given the problem of preparing young people to perform responsibly in their own communities in the instance of an emergency. Aware of the findings of Lewin (2) that a lecture was not likely to be highly effective, Inbar created a model of an emergency designed to give youths practice in useful behavior in a disaster-like circumstance.

Inbar's model was carefully structured to provide typical experiences and, hopefully, develop in the youths the concepts of cooperation, preparedness and the like needed in a real situation. The basic setting for the model was a small table on which was spread a map of a hypothetical town showing roads, police and fire stations, shopping centers, residential districts, etc. As the potential players were familiarizing themselves with the community situation they were assigned positions (or roles) as mayor, city manager, policeman, fireman, maintenance man, etc. and given the location of the property which they "owned" as well as the location of "relatives" and "friends."

Suddenly, it was announced that a major disaster had struck the community they were studying. The immediate problem of the group of youths was to help people, protect property and limit the possible spread of the damage. This required action and reciprocal action (interaction) among the members of the group, and each youth played the role assigned according to his or her interpretation of it.

To stimulate interest Inbar introduced the elements of a game into the action. The youth who accomplished the most with the least expenditure of energy and anxiety units was to be declared the "winner."

Upon completion, the total performance was subject to analysis, achievements and failures were identified and the performance replayed for improvement. In this way, the model situation became a "laboratory" for the study of group and individual performance. Mistakes harmed no one, and they could be corrected.

Later Inbar administered his disaster game to three other groups and reported that a measurement of results showed increased interest in community preparedness and in useful action to be taken in the instance of an emergency (3).

The findings of Inbar are similar to those of many others; simulations create interest and tend to change attitudes to a greater degree than traditional exercises. But cognitive learning has not been shown to be greater with the use of simulations than with other sound methods for learning. But we hasten to add that the uses of simulations in recent years have been pioneer experiments. Many lessons have been learned; they are reviewed in this booklet so that teachers may apply them to future work in this area. The task will not be easy for modern society is complex, requiring many role interactions and decision making situations (4). Many models will be needed, and they will have to be coordinated with an up-to-date curriculum. Sporadic "hit or miss" simulations, interesting as they may be, must be considered inadequate to meet modern needs.

As has been implied, society is *interaction* between and among persons. To illustrate, let us examine a possible relationship between two persons in face to face contact. Person A initiates an action, whereupon Person B directs his action in response to Person A. This is called reciprocal action or social interaction. In the process each of the two partici-

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* This pamphlet is the writer's interpretation of numerous contributions in these areas. The work of many scholars is gratefully acknowledged and cited in the references. However, the writer assumes complete responsibility for all interpretations made.

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SO 007 109

pants *interprets* the meaning of the other in terms of his or her probable "survival" in the situation. Thus, the social acts become, reciprocally, positive or negative reinforcers and persons associated with those acts run the risk of being accepted or rejected (5). Responses may be mutually positive, mutually negative, or a combination thereof.

The assumption of this pamphlet is that the interaction process modifies human behavior and, also, helps the participants "become conscious of (their) own actions from society's standpoint" (6). This assumption appears to be supported by a host of research studies. Recently, Collins and Guetzkow reviewed many of these findings and concluded that they showed that "face-to-face groups have a profound impact on the motivation, knowledge and personalities of participants" (7). There is good reason to believe, therefore, that models of real social interactions which involve students give promise of producing valuable educational results.

A word must be said about roles. In any American family there are expected behaviors of husband toward wife, mother toward daughter, father toward son, and also they are reciprocal. We like to call this type of action *role-interaction*. Role-interaction is an on-going process. It may begin with the participants' ideas of expected behavior; but as the relationships continue new practices and "rules" may be made. These adjustments are influenced by the past, to be sure, are dictated to a greater extent by present situations. The relationships are partially customary, partially unique. They are not an automatic, record-like replay of routine expectations. (See Blumer, *op.cit.*, reference 5.) Life is dynamic rather than static.

When we assume that social interaction modifies human behavior it follows that the greater the volume of interaction the greater are the chances of behavior modification. It is important, therefore, for persons using simulations to consider factors which promise to encourage the maximum of interaction in their simulated groups.

Circumstances Which Maximize Interaction in Classrooms

The teacher who would use simulations should consider some of the practical lessons learned over the past few years (8). The first lesson is that students should feel a challenge. An important task of the teacher is to help students perceive a goal which promises to meet the challenge and to encourage them to find the way by their own efforts. This idea is so basic that it was first given shape by Confucius; much more recently, Piaget has written that, as far as possible, students should be freed from "the mystical world of the adult" (9).

The second task is for the class to build a carefully structured yet flexible plan for the development of a simulated event. Telling the students to "buzz" the subject is poor planning. The following elements should be considered.

Since information is important, facts, attitudes and values must be obtained from all sources possible: lectures, readings, films, observations, interviews. In the case of a prepared game, instructions must be studied as well. This work involves *individual* responsibility and is necessary except, perhaps, in the lower grades.

Prepared students may compare their findings with others in small groups. This experience provides the opportunity for the reinforcement process to modify behavior (10). And, of course, the division of the class into many small groups makes possible, in itself, a marked increase in the volume of interaction.

The optimum size of a group has been estimated at from four to five members. Torrance reported that six members is the optimum size for five-year-olds (11). Inbar found that interaction lessened among high school age groups when they exceeded nine in number (12). The writer's experience indicates that four or five members is a good working number for college students. Large groups tend to split into small groups.

Perhaps more important than numbers is the compatibility of a small group. McKenney and Dill, for example, reported that students performed better when they were given the opportunity to "decide for themselves how team assignments should be made and how they should be organized" (13). It follows that "free association" must be given a chance to operate. This can be done in an informal atmosphere. More formally, students may indicate their choices on a Group Preference Questionnaire (14). The choices can then be tabulated in a matrix which then can be used to implement them. The choices, of course, are for a small group working on a particular problem—not for group membership in general. Group membership will change from time to time as topics change.

For simulations we believe that homogeneous groups, so commonly used, are not as effective as heterogeneous groups which are more like the groups in everyday life. Williams, for example, showed that motivation was higher in heterogeneous groups in the elementary school than in homogeneous groups (15).

Small groups have been found to interact well when the leadership is "natural" rather than "unnatural." By this we mean that an "unnatural" leader is one arbitrarily appointed by the teacher without consideration of the wishes of the members of the group. The best leader is the one who is accepted by the group because he or she is recognized as the one with the most "know-how" and, perhaps, the most respect for members' feelings too (15). A striking illustration of the importance of this idea was observed by the writer. A large scout troop under a dedicated scoutmaster was doing poorly. The meetings were disorganized and an administration of the Group Preference Record showed that all patrol leaders were rejected by the members. The patrol leaders had been appointed by the scoutmaster because the parents had prominent names in town. When those who received the most choices from the scouts themselves became leaders, the troop immediately became one of the finest troops in town. The leadership was willingly followed (17).

A relatively compatible group of four students might have eight acceptances and four rejections. The "natural" leader might receive three acceptances and give three acceptances to those in his group. One of the members might receive two rejections and give one. This member has trouble relating to others, due perhaps to lack of social experience, which may be obtained in guided role-interaction. In this way many valuable aspects of encounter groups can be obtained while the interaction is related to academic content (18, 19).

In connection with the problems students have in relating to others in a dynamic situation, we may add that it is possible for the members of a small group to be trained to analyze its own interaction patterns, hopefully resulting in an increase of interaction. First, the group members must realize that their actions and interactions are not "perfect" representations of reality—only their best estimates—and that, therefore, their work can be improved with careful study. The group may also contribute to an increase of interpersonal acceptances by analyzing their own interaction patterns and accompanying role-strains. An estimate of their

leadership effectiveness may be made, also. (Procedures for this type of study are outlined in *Small Group Processes*, produced by Sociological Resources for Social Studies and published by Allyn and Bacon, Inc., Boston, 1971.)

Our digression to consider methods of obtaining a maximum of interaction in small groups should be considered of great importance for, in our opinion, small group interaction is the heart of social life and, hence, must be the heart of simulations as well.

When a small group is properly organized, as we have suggested, useful comparisons of the findings of individual study may be made, and the identification of roles to be played later may be begun.

Informed groups are now ready to take their next step. They may consider four possibilities: *focused conversations*, *role-playing*, *role-playing with sociodrama* or *gaming*. Some combinations thereof are possible. Also, all four might operate in a series, beginning with focused conversations.

The term *focused conversation* is the writer's adaptation of the term *focused interaction* contributed to the literature by Goffman (20). Conversations are "natural" forms of communication between talker and listener. The conversational material may be made the desired content of a unit in a course such as that used in the comparisons previously mentioned. Conversations can begin in groups of two and readily extend to four-member groups. These conversations can be considered a "warm-up" for general class discussion (21).

The focused conversation does not involve students in role-playing, sociodrama or gaming and economizes, therefore, on time. It is also a good preparation for role-playing if the class wishes to enter it.

In small-group *role-playing*, predetermined roles may be represented or played by each of the members; roles may be interchanged so that each student may obtain the "feel" of various approaches to the problem under consideration. Alternate "solutions" to a given problem may be considered as well, and practice may be had in solving problems wisely (22). Role-playing in small groups can involve all the students in the class and give the teacher the opportunity to assist individuals as well as groups.

The *sociodrama* is an easy transition from role-playing. "Volunteers" from the class may role-play a problem in social relations before the class, in the form of a "drama"—a *sociodrama*. In this way the whole class, having developed a keen interest in the particular role-interaction in the small group role-playing, will quickly suggest new interpretations of the roles as played, suggest replaying, and playing different possible "solutions" to the problem.

The *game*, sometimes called a simulated game, may be a simulation of a practical or competitive social situation in modern life. These situations often include practice in strategies for winning—individually or in cooperation with others. Games may be built by a class in cooperation with the teacher; but, since games have become the most popular form of simulation, many companies (see list on page 8) have prepared complete games, including descriptions of roles involved, readings, a set of rules, needed equipment and scoring sheets. Prepared simulations in the form of games are a great convenience for the busy teacher. The game is for pragmatists rather than philosophers; yet there is little doubt that it provides practice in everyday strategies related to life's turmoils (23). [Chapin (24) has a different interpretation of simulation which is not used here. The reader is referred to the article.]

It is important that all simulations used in class be compared with reality. Smoker puts the ideas this way, "model and reality intertwine, evolve and adapt in a continuous process of image creation" (25). In doing this it is possible for new orientations toward the present and the future to be perceived.

The maximum of interaction may probably be best produced in the utilization of the following seven steps:

1. teacher-student selection of a problem or goal or both
2. the search for information related to the problem and the attainment of the goal
3. the organization of compatible groups in which interaction can be maximized
4. comparison of student findings in the small groups
5. the identification of roles and role-playing in small groups
6. the sociodrama before and with the class as a whole and
7. interpretation which involves analysis, identification of alternate solutions, replaying alternate solutions for "workableness," and deciding which solutions are most suitable.

It is not necessary, of course, for a simulation to include all of the steps. As we have seen, the focused conversation switches from step 4 to general class discussion; so, also, role-playing may switch from step 5 to general class discussion. It is up to the teacher and the class to use the simulation idea in ways most suitable to the occasion.

Classroom Applications

The Elementary School

Leaders in elementary education are conscious of the need for more activities emphasizing free communication, social responsibility and democratic decision-making (26). One solution may be found in the use of simulations.

Aware of the theory and practice of simulations, the elementary school teacher may achieve some of the modern goals in a relatively simple manner. A few examples will clarify this.

The Lippitts (27) developed a plan to promote what we will call a focused conversation among fourth-grade children and between children and adults. Pupils were encouraged to nominate those of their peers whom they regarded as expert in specific fields of knowledge. These became the classroom resource pupils—acknowledged consultants for other students. The resultant consultations might be considered talker-listener roles. Also adults were given special training leading "focused conversations" among younger children.

Role-playing was also introduced by the Lippitts. The problem presented was that of the teacher-pupil gap. The question was, "Why do pupils fear asking a teacher for help?" Pupil roles were: (1) teacher, (2) student afraid of disapproval by peers, (3) student afraid of the teacher if he admits he cannot do the work alone. After role-playing the problem before the class (sociodrama), small pupil teams considered how teacher and children "might behave differently to relate better and to learn more" (28). These were focused conversations. Pupil "inventions" were role-played for analysis in the small teams.

The Lippitts reported that the simulations contributed to the development of new norms "about child initiative in seeking and utilizing resource helpers" (29). In this way a fourth-grade class practiced decision-making in an atmosphere devoid of authoritarianism.

One of the first to show how the sociodrama could be introduced into the elementary school classroom was Jennings (30). Jennings asked a class of fifth-grade pupils to name some social relations which bothered them. The most frequently mentioned was that of "conflict" between mother and child over errands. Many fifth-grade children complained about being required to make two trips to the store when one trip would do. They did not know what to do about the problem. They were ready to learn.

In this instance the search for information was in their own experience which they were to analyze. With the teacher's help, the children identified the following roles: the thoughtless mother, the annoyed daughter and the irritated father. The children outlined the action-feelings appropriate to each role in preparation of a small sociodrama. (Jennings did not report the use of small groups as a preliminary to sociodrama.)

Pupils volunteered to re-create the problem home situation before the class. Part of what was said was:*

Mother: I want you to go to the store for a loaf of bread and a bottle of milk.
Marilyn: Can't you wait for a little while? I'm studying.
Mother: I want you to go right now.
Marilyn: Oh, alright! (Leaves the room.)
Father: I can't stand the way she talks.
Mother: We'll just have to break her of the habit. (Marilyn returns.)
Mother: Put them in the kitchen. (Marilyn puts them in the kitchen and returns to studying.)
Mother: Oh, I forgot, I want some Sunshine Cleaner. (Marilyn sighs and goes out with a look of disgust.)

After the sociodrama, part of which has been presented here, it was easy for the class to see that no one was pleased. It was also clear that mothers needed to have their memories trained. One child said, "Sometimes they feel like bothering you."

This modest sociodrama helped pupils see that lack of consideration for others caused unhappiness in a home. Finally, a reenactment showed how the family could agree upon a list of items before the daughter went to the store. Thus, by means of a simple simulation, an ethical standard came to be understood and behavior could be changed.

Brown (31) arranged a simulation of a field trip to help fourth-grade children study the relative merits of playing different roles to promote learning and to develop respect for others. A sociodrama before the class included the representation of the following roles: the ideas initiator, the approval seeker, the follower, the disrupter, the agreer and the heckler. There were six roles; and, in addition to the roles in the sociodrama, each member of the class was assigned a "stand-in" role so that each role was "covered" by several observers. Thus, after the sociodrama, the role-playing could be replicated in a number of small groups of six each (32).

The analysis compared the relative merits of different roles in getting a learning job done and revealed the importance of the consideration of personal feelings in the process; some offended pupils withdrew from the group work and hence reduced group productivity (33).

For the upper grades Baker (34) developed an American history game designed to teach an understanding of the relationships among four sections of the United States just before the Civil War. Students represented the North, the South, the East and the Border States. Each student was assigned a position as a responsible official of a given section, or "nation" as Baker called them, and was instructed to assume the responsibility of maintaining the security, prosperity and prestige of his or her section in conference with representatives of the other sections.

Provision was made for individual study, reports and informal discussions to clarify the issues involved, but decisions with respect to policy and procedures were made in conference in the "World Council." Upon the completion of the world conference, in which the final decisions were voted upon, the results were compared with actual happenings in historical times.

In a controlled experiment, Baker found that the "simulation classes" "acquired a more favorable attitude to centralized and efficient policy-making procedures" as well as more knowledge than control groups. (This is the exception with respect to acquiring cognitive knowledge.) Baker's game was carefully structured and represents an improvement over some of the older studies.

We conclude this section with a mention of some cautions with respect to the use of simulations. They are time-consuming. They are interesting but not always educational. Games may place too much emphasis upon winning. These are points made by Beals (35). We may say that the focused conversation may be used to save time when necessary, that careful structuring may improve cognitive learning and that games should emphasize meaning (as Baker's did) more than winning.

It should be mentioned that the modern classic work on role-playing and the sociodrama is *Role Playing for Social Values* by Fannie and George Shaftel (Prentice-Hall, 1967).

The High School

Simulations may be used in the high school in accord with the requirements of the curriculum and the interests of students in the social studies.

As we have pointed out, the *focused conversation* is a universal means for the exchange of information and experience. It can be simulated in a high school class. Suppose a high school class desires to study the effects of rapid social change upon life in American cities (36). To interest and inform the students, the teacher could trace the major changes which have taken place in America during the last one hundred years, especially the tremendous growth of the cities. Following this, students could start their search for more detailed information, including material on the ecology of the city, the nature of stratification, and the degree of mobility among the social classes. Individual student findings may, then, be compared in focused conversations in small class groups. To repeat a point made, one student in a small group may act as *informed* spokesman while the other or others act as *informed* listeners and critics. In this way we have the talker-listener role-interaction situation. The informed listener responds knowingly, appreciatively and helpfully as well as critically. Again, as pointed out, the "warm-up" in the small groups can be excellent preparation for stimulating general class discussion. We can point out again that the procedures outlined give the teacher a good opportunity to identify and to deal with individual differences as well as to act as a resource person and consultant.

There is almost no end to the number of topics and problems which can be handled in focused conversations and also in the more specialized role-playing, sociodramas and

* The following conversation is from the Jennings' article as cited in reference 30. Permission to use granted.

games. For example, issues related to such topics as the following can be adapted for simulations: how Athens lost her Empire, dissensions among the early Greek cities, the fall of Carthage, the rift between Moslem and Hindu, the Great Wall and the burning of the books, the breach between Eastern and Western Christendom, Dante's study of an ideal state, the division between the King and the people at the time of James I, the new industrial civilization after Napoleon and the rise of materialist philosophies, Japan and America, the contest for North America, the rise of the United States, North vs. South in the United States, "Morganism" vs. the middle class, segregation in education, sectional differences in the United States, ethnic relationships, factors influencing economic growth, pollution, crime, the energy crisis, federal vs. state power, government spending for welfare, justice in America, the quality of life vs. the gross national product, national priorities—the list is practically endless. (The foregoing suggestions are, in part, from W. N. Weech, ed., *History of the World*; William Miller, *A New History of the United States*; and topics considered by the National Council for the Social Studies at the 1973 Annual Meeting in San Francisco.)

Studies of the use of the focused conversation have shown it to create student interest and develop self-confidence and leadership abilities but that it does not improve cognitive learning to any substantial degree (37).

Role-playing and the sociodrama may be considered extensions of the *focused conversation*. Goodsell demonstrated how all three procedures could be combined in one operation and at the same time be integrated with a traditional curriculum (38). The unit assigned to Goodsell for seven weeks was the arms race since 1939. The first six weeks were spent in the traditional study and classroom discussion of facts and issues. The students thus had time to develop some understanding of the subject. At the beginning of the seventh week, five small teams were set up to represent five countries' views on the arms race. The People's Republic of China, the U.S.S.R., the U.S.A., India and Pakistan. Students were assigned to a particular team because of their probable or known interest.

Following the team assignments, the class was told that Pakistan had invaded Kashmir. Each team was asked to prepare a statement of its position with respect to this problem. Each statement was then read to the class for comment. Following class comments, the teams drew up revised statements which were read to the class by team representatives. The India representative suggested that Kashmir not be given up without a struggle. But the moderator mentioned that Pakistani troops were slaughtering thousands of Hindus trying to flee to India. The Indian delegate had no comment. Then the U.S.A. delegate suggested that military aid be given to India, but he turned silent after he received a secret note from another delegate implying that internal enemies of the United States might poison the drinking water in U.S. cities if this were done. Moves and counter-moves continued accompanied by vigorous discussion at nearly every point. Finally, it was decided that a U.N. peacekeeping force should occupy the border.

Goodsell reported that student interest was tremendous and students became fully aware that international relations were very complicated.

The Greenhaven Press has recently announced an *Opposing Viewpoints Series* dealing with many controversial issues. One booklet in the series is entitled *Constructing a Life Philosophy*. Alternative views are presented in short articles by distinguished representatives of differing viewpoints. One example in the exercise is an article on "The Philosophy of the Dollar" by Robert L. Heilbroner; another is "The Hindu View of Life" by Sir Sarvepalli Radharishnan. These booklets lend themselves well to use in simulations. Views can be compared in focused conversations, then can be role-played and ultimately expanded into sociodramas.

Because the Middle East crisis is, has been, and is likely to remain an explosive issue, we take the liberty to suggest a plan for its simulation. We shall emphasize the Israeli-Egyptian aspect of the crisis (39). This matter should be an extended unit, beginning with a study of the Middle East setting. Historical information is of considerable importance here, involving the following sample topics: the conflicting claims of Jacob and Ishmael to the title to the land of Canaan, the Diaspora, the rise of Zionism, the Balfour Declaration of 1917, the Arab League, the Israeli-Egyptian war of 1948, the establishment of the State of Israel, the Suez war of 1956, the Six Day War of 1967, guerilla warfare including the Munich attack, the Lybian airliner affair and the diplomatic murders at Khartoum, the perpetual state of tension and the influences exerted by the U.S.S.R., China and the United States in the Middle East, and the 1973 conflict.

Findings can be compared in focused conversations in small groups. Then, in preparation for role-playing, the positions of the Israeli, the Egyptians, the Russians, the oil producers, NATO and others may be identified (40). Some of the current issues are: internationalization of the Suez Canal, limitations of the flow of weapons, recognition of Israel as a state, return of all Palestinian refugees, and the possibilities of permanent peace without a declared victor. New issues will continue to develop. Actors, representing the different positions with respect to a given issue, can role-play in small groups. Finally, "volunteers" may stage a sociodrama on an issue for the criticism of the class. Alternate "solutions" to the problem presented might come up with an "invention" in the diplomatic area, especially if a talented student acts as a negotiator.

Again we must note that capable students will become leaders and group pressures will push some students toward improvement, while others may be overwhelmed, becoming withdrawn or aggressive and avoid responsibilities.

The game is a form of simulation which tends to emphasize, indeed encourage, competition, using scoring devices to measure the success of individuals or groups. Many excellent games are now available from publishers listed at the end of this booklet. We describe a few here, briefly, to indicate their general nature.

A good example of a well-structured game is the "International Simulation" (41). It comes in a kit which contains materials, general instructions, and data pertaining to a few nations, including their wealth, their form of government, population, defense position, etc. The game suggests that two to five students be assigned to represent each of the nations included in the game. Then a problem in international relations is presented. Each national group must develop a plan to utilize its nation's resources to meet the problem situation. At the end of the exercise, "allocations and decisions are calculated for each nation." There are no individual or group losers; rather, the degree to which each nation has prospered under the circumstances is indicated. These indications provide an excellent opportunity for the identification of wise and unwise decisions and the replaying for the correction of mistakes.

In the area of political science, an excellent game, called "Napoli" (42), outlines the views of liberal and conservative congressmen with respect to current issues. Participants,

playing the roles of congressmen, must represent their own parties and their constituents and then vote on important bills before the Congress. In the process each player is given a party score and a state score as well as a score representing his or her probability of re-election. The emphasis is upon winning; yet students obtain a realistic introduction to political processes and social issues.

In the area of sociology "The Ghetto Game" (43) is well thought-out. It endeavors to give middle- and upper-class high school students an opportunity to understand life in the ghetto areas of a city. Each player is assigned a role in a problem situation; for example, a 24-year-old wife with three young children married to an unskilled laborer with a tenth-grade education has the problem of feeding her family. Again, numerous life problems and decisions are to be made by a 20-year-old single male with a ninth-grade education. At present he makes a living by hustling and working sporadically. What choices may he have to make? Decisions of players will have to be made within the framework of job opportunities, welfare and food stamps, and chance factors. A complete kit accompanies the game, including profile folder, reading suggestions, names of appropriate films, and questions for discussion.

Because of the skill with which this game was constructed, Kidder (44) decided to test claims made for it. He hypothesized that the value conflicts experienced by the players in the game would create feelings of cognitive dissonance in the participants and, consequently, change attitudes. To test this hypothesis, Kidder measured the attitudes of three groups of college students who played the game in its entirety. After analyzing his voluminous data, Kidder concluded that this game would indeed change attitudes and emotions and that emotions aroused in individuals "would generalize to one or more subjects in the same game."

Many games are now available. Carlson (45) has listed a number of them and we have included a long list of publishers of games with the names of some of the games they have published (see Bibliography).

Evaluation

Simulations have become popular; yet, the nature of their educational results is not firmly established. As mentioned, critics wonder if the extra time expenditure increases learning to any great extent. Available evidence, to be reviewed shortly, suggests that the critics are right—to a degree. But Stoll and Inbar (46) decline to accept the evidence. They declare that "criticisms of early work no longer apply" because the most recent simulations are more carefully structured. But for now we shall have to decline the acceptance of the views of Stoll and Inbar until more experimental results are available. We hasten to state, however, that it is clear that in simulations students *do not learn any less* than in traditional procedures. And there may be some important "fringe benefits." So, let us explore some of the available findings.

All who have used simulations report strong student interest as compared to traditional methods for classroom procedure. Cherryholmes (47), for example, states that the only finding on which all six studies agreed was on the matter of interest. And Goodsell (48), previously cited, reported tremendous interest. These findings are not unimportant, for interest contributes strongly to motivation, especially in a time when many students have lost interest in traditional classroom procedures. Simulations could have a significant influence in retaining students in social studies courses.

Studies of attitude change yield mixed findings. Cherryholmes believed his six studies reflected more negative attitude change than positive, but other research does not bear this out. De Kock (49) reported that his *Black-White* game increased racial tolerance significantly. The *Career Game* improved the understanding of the difficulties in making career decisions. The *Legislative Game* developed a realistic understanding of the legislative process (50). The studies of Zeleny (51) indicated that focused conversations strengthen self-confidence and leadership qualities in participants, and to add another finding from Kidder (52), attitudes with respect to the honesty of ghetto people were changed by the *Ghetto Game*.

In the area of cognitive learning, simulations seem to have no significant advantages. In the six important studies reviewed by Cherryholmes (53), students' cognition was not increased. The only available study that showed a significant difference in favor of simulation was the experiment of Baker (54). In studies in 8th, 10th and 11th-grade classes, Livingstone (55) found that a simulation group dealing with trade and development did not improve abilities to carry out related but separate tasks any better than did a control group.

A reasonable conclusion is that any method administered by a competent teacher will obtain satisfactory results. Evidence to support this assertion comes from a very systematic study made by Hug (56). He reported that high school biology students "were able to meet cognitive objectives equally well through independent study, small group discussion and large group presentations provided that the instructional packages are pre-tested, rewritten for comparable populations."

Simulations, we believe, can be of real service to youth when they extend traditional individual learning to include social learning—all methods being part of one all-inclusive process. It appears, also, that critical thinking can be taught by either traditional or simulation methods, for Cherryholmes' (57) differences as reported were not significant.

Even though current experimental research provides only limited support for simulations, there are other reasons why they should be considered for regular use in conjunction with other classroom procedures. They are in accord with the democratic ideal; they apply many of the accepted "principles" of learning; and, they emphasize *behavior* in contrast to mere memorization. It is easy to see that a simulation deemphasizes authoritarian procedures by providing generously for focused but free conversations, intense dialog, and the consideration of the social consequences of alternate policies. Without further elaboration of some "principles" of learning used in simulations it is easy to see the provisions for motive, activities, freedom from dominance and anxieties created thereby, sharing of knowledge, positive and negative reinforcement, and social sensitivity (58).

Of special significance is the emphasis of simulations upon *behavior* rather than the memorization of miscellaneous pieces of information, valuable as they might be. The traditional approach to learning tends to consider facts as ends in themselves while the simulation point of view considers them as guides to useful behavior. De Kock (59), for example, noted that his *Black-White* simulation provided for writing, reading, hooting and cheering, organizing and speaking to influence others. In simulations, one practices talking and listening, leadership, analysis, sensitivity to others and to norms (60).

Behaviors such as the above may be observed by the teacher, but, perhaps, more important than the notations of behavioral successes and failures of the teacher are the

group's own judgments of its leadership, its productivity, the degree of compatibility, etc. An alert small group, in analyzing itself, may come to the same conclusions as Collins and Guetzkow (61) and realize that an acceptable contribution to group discussions is supported by evidence, logic and experience. Conversely, irresponsible contributions, not to mention disclaiming responsibility, is not acceptable. The group member who does his homework is the one who is likely to be influential in the group, all other factors being equal. (The phrases in this paragraph are, in part, adaptations from Collins and Guetzkow.)

In closing, we might suggest that, increasingly, social studies classrooms may become sociological laboratories in which models of reality—whether historical, contemporary or projected—are created, analyzed, interpreted and rebuilt in practice. In this way social wisdom may be acquired (62).

REFERENCES

1. Michael Inbar, "The Differential Impact of a Game Simulating Community Disaster," *American Behavioral Scientist*, October 1966, pp. 18–27.
2. Kurt Lewin, "Group Decision and Social Change," in T. M. Newcomb, Eugene Hartley and others, *Readings in Social Psychology*, New York: Henry Holt and Company, 1947, pp. 326–344.
3. Michael Inbar, "Participating in a Simulation Game," *Journal of Applied Behavioral Science*, April 1970, pp. 239–244. The complete revised game is now available under the new title, *Community Disaster*, New York: Western Publishing Company.
4. Alvin Toffler, *Future Shock*, New York: Bantam, 1971, p. 34.
5. Herbert Blumer, *Symbolic Interactionism*, Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1969, pp. 1–21 and B. F. Skinner, *Beyond Freedom and Dignity*, New York: Alfred A. Knopf, 1971, pp. 106–115.
6. Darwin L. Thomas, David D. Franks and James M. Calonico, "Role Taking and Power in Social Psychology," *American Sociological Review*, October 1972, pp. 605–614.
7. Barry E. Collins and Harold Guetzkow, *A Social Psychology of Group Process for Decision Making*, New York: John Wiley and Sons, 1964, p. 53.
8. John D. Baldwin, "Influences Detrimental to Simulation Gaming," *American Behavioral Scientist*, July-August 1969, p. 17.
9. Jean Piaget, as cited by David Elkins in "Giant of the Nursery," *New York Times Magazine*, New York, May 26, 1968, pp. 25ff.
10. John D. Baldwin, *op. cit.*, pp. 17–18.
11. E. P. Torrence, "'Structure' Can Improve the Group Behavior of Five-Year-Old Children," *Elementary School Journal*, November 1971, pp. 102–106.
12. Michael Inbar, *op. cit.* in reference 1, and E. P. Torrence, "Group Size and Question Performance of Pre-primary Children," *Journal of Psychology*, January 1970, pp. 71–75.
13. James L. McKinney and William R. Dell, "Influences on Learning in Simulation Games," *American Behavioral Scientist*, October 1966, p. 32.
14. Leslie D. Zeleny, "Using Sociodrama and Sociometry," in Richard E. Gross and Leslie D. Zeleny, *Educating Citizens for Democracy*, New York: Oxford University Press, 1958, Chapter 10.
15. Mary Heard Williams, "Does Grouping Affect Motivation?", *Elementary School Journal*, December 1972, pp. 130–137.
16. James L. McKinney and William R. Doll, *op. cit.*, p. 32 and Robert F. Bales, *Interaction Process Analysis*, Reading, Mass.: Addison-Wesley Publishing Company, 1950, pp. 8–10.
17. John D. Baldwin, *op. cit.*, p. 20, adapted.
18. Solomon Asch, *Social Psychology*, Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1952, pp. 451–453. Asch demonstrated the power of the group over the individual.
19. John D. Baldwin, *op. cit.*, p. 14, adapted.
20. Ewing Goffman, *Encounters*, Indianapolis: Bobbs-Merrill Company, 1961, Chapter 1.
21. Leslie D. Zeleny, "Role Interaction in Small Groups," *California Social Science Review*, January 1965, pp. 12–18. See also, Leslie D. Zeleny and Richard E. Gross, "Dyadic Role-Playing of Controversial Issues," *Social Education*, December 1960, pp. 354–358, 364.
22. Leslie D. Zeleny, "Sociodrama as a Means of Studying Controversial Issues," *Southern California Social Science Review*, October 18, 1948. See also E. O. Schild, "Interaction in Games," in Sarene S. Boocock and E. O. Schild, *Simulation Games in Learning*, Beverly Hills, California: Sage Publications, 1968, pp. 93–104. See also, J. L. Moreno and Leslie D. Zeleny, "Role Theory and Sociodrama," in *Readings in Contemporary Sociology*, Paterson, New Jersey: Littlefield, Adams and Co., 1961, pp. 625–642.
23. Marilyn Clayton and Richard Rosenbloom, "Goals and Designs: Games in a New Social Studies Course," in Boocock and Schild, *op. cit.*, pp. 85–92.
24. June R. Chapin, "Simulation Games," *Social Education*, December 1968, pp. 798–799.
25. Paul Smoker, "Social Research for Social Anticipation," *American Behavioral Scientist*, July-August, 1969, p. 7.
26. Bernard J. Guerney and Mary-Linda Merriam, "Toward a Democratic Classroom," *Elementary School Journal*, April 1972, pp. 372–383.
27. Peggy Lippitt and Ronald Lippitt, "The Peer Culture as a Learning Environment," *Childhood Education*, December 1960, pp. 135–138.
28. *Ibid.*, pp. 136–137.
29. *Ibid.*, p. 138.
30. Helen Jennings, "Sociodrama as an Education Process," in *Fostering Mental Health in Our Schools*, Yearbook of the Association for Supervision and Curriculum Development, 1950. Permission to quote from this article was granted for the first edition of this pamphlet by Helen Jennings and the Association. This permission is gratefully acknowledged.
31. Edna Stewart Brown, "How We Act in Groups," *Childhood Education*, December 1950, pp. 156–159. Some of the phrases used here are similar to those written by Brown and are acknowledged.
32. *Ibid.*, p. 157.
33. *Ibid.*, p. 158.
34. Eugene H. Baker, "A Pre-Civil War Simulation for Teaching American History," in Boocock and Schild, *op. cit.*, pp. 135–142. The *Teachers Guide*, Participants Manual, etc. are copyrighted and may be obtained from Baker.
35. Paul Beals, "Games and Simulations," *Grade Teacher*, March 1971, pp. 94ff.
36. Leslie D. Zeleny, "Role Interaction in Small Groups," *op. cit.*, pp. 12–18.
37. Leslie D. Zeleny, "Teaching Sociology by a Discussion Group Method," *Sociology and Social Research*, November-December 1927, pp. 162–171. See also by the same author, "An Experimental Appraisal of a Group Learning Plan," *Journal of Educational Research*, September 1940, pp. 37–42.
38. David R. Goodsell, "Simulation Games for Social Studies," *The Independent School Bulletin*, February 1972, pp. 44ff.
39. Leslie D. Zeleny, "Sociodrama as a Means of Studying Controversial Issues," *op. cit.*
40. Department of State Publication 8417, Near and Middle East Series (revised December 1968). See also Robert J. Donovan, *et al.*, *Israel's Fight for Survival*, New York: New American Library, 1967.
41. R. Roger Majak, "Social Science Teaching with Internation Simulation: A Review," *Social Studies*, March 1968, pp. 116–119. The complete kit for this simulation is available at Science Research Associates, Chicago. The authors of the simulation are Harold Guetzkow and Cleo H. Cherryholmes.
42. *Napoli*, La Jolla, California: Western Behavioral Sciences Institute, 1965 and 1969. The writer wishes to acknowledge the kind permission of EPIC, Boulder, Colorado, for the opportunity to examine this game in their offices.

43. Toll Dove, *Ghetto*, Western Publishing Company, Inc., 1969. Thanks to EPIC, Boulder, Colorado.
44. Stephen J. Kidder, *Emotional Arousal and Attitude Change During Simulation Games*, Baltimore: Johns Hopkins University Press, 1971.
45. Elliot Carlson, "Games in the Classroom," *Saturday Review*, April 15, 1967, pp. 62–64, 82–83.
46. Clarence S. Stoll and Michael Inbar, "Editorial Introduction," *American Behavioral Scientist*, Vol. 10, No. 2, pp. 4–7.
47. Cleo H. Cherryholmes, "Some Current Research on Effectiveness of Educational Simulations: Implications for Alternate Strategies," *American Behavioral Scientist*, Vol. 10, No. 2.
48. David P. Goodsell, *op. cit.*, p. 48.
49. Paul De Kock, "Simulations and Change in Racial Attitudes," *Social Education*, February 1969, pp. 181–183.
50. Sarene S. Boocock, "An Experimental Study of the Learn-Effects of Two Games with Simulated Environments," in Sarene S. Boocock and E. O. Schild, *Simulation Games in Learning*, *op. cit.*, pp. 107–133.
51. Leslie D. Zeleny, "An Experimental Appraisal of a Group Learning Plan," cited in reference 37.
52. Stephen J. Kidder, *op. cit.*
53. Cleo H. Cherryholmes, *op. cit.*
54. Eugene H. Baker, *op. cit.*
55. Samuel A. Livingstone, "Will a Simulated Game Improve Student Learning of Related Factual Material?", *Educational Technology*, December 1971, pp. 19–20.
56. W. E. Hug, "Comparison of Cognitive and Affective Gain Between Individual Study, Small Group Discussion and Large Group Presentation in High School Biology," *Science Education*, April 1971, pp. 241–247.
57. Cleo H. Cherryholmes, *op. cit.*, p. 6.
58. E. Hilgard, "Learning Theory and Its Application," in *New Teaching Aids for the American Classroom*, Stanford: Institute for Communications Research, 1960, pp. 19–27.
59. Paul De Kock, *op. cit.*, p. 183.
60. Robert F. Bales, *Interaction Process Analysis*, Cambridge: Addison-Wesley Press, Inc., 1950 and Fannie R. Shaftel and George Shaftel, *Role-Playing for Social Values*, Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1967, Chapter 3.
61. Barry E. Collins and Harold Guetzkow, *op. cit.* See also Sociological Resources for the Social Studies, *Small Group Processes*, *op. cit.*, Clarence S. Stoll, "Player Characteristics and Interaction in a Parent-Child Simulation Game," *Sociometry*, September 1969, pp. 259–272 and Dexter C. Durphy, "Planned Environments for Learning in the Social Sciences," *The American Sociologist*, November 1967, pp. 201–206.
62. Clark C. Abt, *Serious Games*, New York: Viking Press, 1970, Chapter IX. Ideas in this chapter are acknowledged and adapted with appreciation.

GENERAL BIBLIOGRAPHY

Abt, Clark, *Serious Games*, New York: Viking Press, 1970.

Bender, David and Gary E. McCuen, *Opposing Viewpoints Catalog*, Anoka, Minnesota: Greenhaven Press, 1972. Announces excellent reading material as a background for many simulations.

Berne, Eric, *Games People Play*, New York: Grove Press, 1964.

Boocock, Sarene S. and E. O. Schild, *Simulation Games in Learning*, Beverly Hills, California: Sage Publications, 1968.

Callois, Roger, *Man, Play and Games*, New York: Free Press, 1961.

Coleman, James, *The Adolescent Society*, New York: Free Press, 1961.

Coleman, James S. and Keith J. Edwards, *Simulation and Games, An International Journal of Theory, Design and Research*, Beverly Hills, California: Sage Publications, Inc. This is a projected journal in the field.

Gameson, William A., *SIMSOC, Simulated Society*, Riverside, New York: Free Press, 1972.

Guetzkow, Harold, ed., *Simulation in Social Science: Readings*, Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1972.

Inbar, Michael and Clarence S. Stoll, *Simulation and Games in Social Science*, New York: Free Press, 1972.

Mead, George H., "Play, the Game, and the Generalized Other," in his *Mind, Self and Society*, University of Chicago Press, 1934. This chapter has been the theoretical foundation for recent developments. The classic statement.

Mills, Theodore M., *Sociology of Small Groups*, Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1967.

McGrath, Joseph E. and Irwin Altman, *Small Group Research*, New York: Holt, Rinehart and Winston, Inc., 1966.

Moreno, Jacob L., *Who Shall Survive?*, New York: Beacon House, Inc., 1953. This was first published in 1934 and has had major influence as a theoretical background for the development of the sociodrama.

Nesbitt, William, *Simulation Games in the Social Science Classroom*, New York: Thomas Crowell, 1971.

Piaget, Jean, *The Moral Judgment of the Child*, New York: Free Press, 1948. This is a major classic.

Shaftel, Fannie R. and George Shaftel, *Role-Playing for Social Values*, Englewood Cliffs, New Jersey: Prentice-Hall, 1967. This is essential for elementary school teachers.

Shirts, R. Garry, "Games Students Play," *Saturday Review of Literature*, May 16, 1970, pp. 81–82.

Werner, Roland T. and Joan T. Werner, *Bibliography of Simulations: Social Systems and Education*, La Jolla, California: Western Behavioral Sciences Institute, 1969.

Zuckerman, David W. and Robert E. Horn, *The Guide to Simulation Games for Education and Training*, Cambridge, Mass.: Information Resources, Inc., 1970.

PUBLISHERS OF GAMES*

Abt Associates, Cambridge, Mass., Elementary School Games: *Bushmen Hunting, Seal Hunting, Market, Sierra Leone, Economy*. High School Games: *Adventuring, Empire, Manchester, Steam, Galapagos, Grand Strategy, Simpolis*.

Academic Games Associated, Baltimore, Maryland. *Democracy, Life Career, Community Responses, Parent-Child, Consumer, Economic Systems, Information, Drug Debate*.

Benefic Press, Westchester, Illinois. *Market*.

Educational Development Center, Inc., Columbus, Ohio. *Empire*.

Free Press, Riverside, New Jersey. *Community Land Use Game*.

Greenhaven Press, Anoka, Minnesota; excellent selected readings on both sides or all sides of controversial subjects.

Holt, Rinehart and Winston, New York. *Presidential Election*.

Instructional Simulations, Inc., St. Paul, Minnesota. *Campaign, Impact, Insight*.

Macmillan Company, New York. *Strike*.

Psychology Games Today, Del Mar, California. *The Cities Game, Blacks and Whites*.

Science Research Associates, Inc., Chicago, American History Games: *Colony, Frontier, Reconstruction, Promotion, Intervention, Development, The Community, Internation Simulation*.

Simile II, La Jolla, California. *Conflict* and many other simulations.

System Gaming Associates, Ithaca, New York.

Urbandyne, Chicago, Illinois. *Urban Dynamics, Youth Culture Game*.

Western Behavioral Sciences Institute, La Jolla, California. *Crisis, Napoli, Plans, Sitte, Starpower*.

Western Publishing Company, Inc., New York. *Consumer, Democracy, Generation Gap, Economic System, Ghetto, Life Career Game*.

ANALYSIS OF GAMES AND SIMULATIONS

Charles, Cheryl and Ronald Stadsklev, eds., *Learning with Games: An Analysis of Social Studies Educational Games and Simulations*, Boulder, Colorado: Social Science Education Consortium, Inc., 1973.

* This list of publishers was compiled from many sources, but two major sources are acknowledged: "Partial Bibliography of Simulations and Games for the Social Sciences," an unpublished mimeographed manuscript prepared by Cathy S. Greenbelt of Rutgers University, and Boocock and Schild, *op. cit.*, pp. 276–279.

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